

Docket:	:	<u>A.12-12-024</u>
Exhibit Number	:	<u>DRA-03</u>
Commissioner	:	<u>Sandoval</u>
ALJ	:	<u>Kim</u>
Witness	:	<u>Sierra</u>



**DIVISION OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION**

**Report on the Results of Operations
for
Southwest Gas Corporation
General Rate Case
Test Year 2014**

Billing Determinants

San Francisco, California
June 3, 2013

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SOUTHWEST GAS CORPORATION
BILLING DETERMINANTS

I. INTRODUCTION

This exhibit presents the Division of Ratepayer Advocates' (DRA) analyses and recommendations on sales and customer forecasts (i.e., billing determinants) for Southwest Gas Corporation's (SWG or Southwest) Southern California Division, Northern California Division and South Lake Tahoe District for Test Year (TY) 2014.

This exhibit discusses the methodologies used by Southwest Gas and DRA for estimating per-customer usage volumes for the Northern California Division (comprising the Northern California and Truckee districts), the Southern California Division (comprising the Barstow, Victorville, Big Bear and Needles districts) and the South Lake Tahoe District.

DRA analyzed Southwest's testimony and supporting workpapers, its methods of estimating total volume consumption and data request responses and emails provided by Southwest.

II. SUMMARY OF RECOMMENDATIONS

The following summarizes DRA's recommendations:

- DRA does not oppose SWG's forecasted therms for Northern California Division, the Southern California Division and South Lake Tahoe District for TY 2014.
- DRA does not oppose SWG's forecasted number of bills for the Northern California Division, Southern California Division and South Lake Tahoe District for TY 2014.

Exhibit DRA-3

III. DISCUSSION / ANALYSIS OF BILLING DETERMINANTS

A. Sales Forecast

SWG forecasts the following total deliveries, or sales volumes, for TY 2014:

- 24,187,720 therms for the Northern California Division,¹ (Table 3-1).
- 104,056,903 therms for the Southern California Division,² (Table 3-2).
- 22,756,866 therms for the South Lake Tahoe District.³ (Table 3-3).

DRA performed an independent regression analysis based upon data provided by Southwest. Differences in the consumption estimates between DRA and Southwest were minimal.

The primary difference in the forecasting methodology between DRA and Southwest is due to the use of the additional recorded data for year 2012. DRA used (2008-2012) five years of recorded data in their econometric model to forecast therms. Southwest used (2008-2011) four years of recorded data in their econometric model.

DRA's application of 2012 recorded data for the regression analysis shows minimal variability after evaluating and comparing it to the results from SWG's econometric model. Therefore, DRA accepts SWG's sales forecasts in their entirety, and recommends the Commission adopt SWG's sales forecast for TY 2014.

¹ Northern California Division Results of Operations, Workpapers, Ch. 9, Sheet 13.

² Southern California Division Results of Operations, Workpapers, Ch. 9, Sheet 28.

³ South Lake Tahoe District Results of Operations, Workpapers, Ch. 9, Sheet 5.

Exhibit DRA-3

Table 3-1 shows the forecast deliveries for the Northern California Division for TY 2014.

Table 3-1
Northern California Division
Forecast Deliveries (Therms)
Test Year 2014

Description	Rate Schedule	DRA Therms	SWG Therms	Difference	%
Primary Residential Gas Service	GN-10	3,537,750	3,537,750	0	0%
Primary Residential Gas Service – Expansion	GN-10	5,355,583	5,355,583	0	0%
Primary Residential Gas Service - PQ/MS	GN-10	18,554	18,554	0	0%
Primary Residential Gas Service - PQ/MS - Expansion	GN-10	1,154	1,154	0	0%
CARE Residential Gas Service	GN-12	322,902	322,902	0	0%
CARE Residential Gas Service – Expansion	GN-12	371,306	371,306	0	0%
CARE Residential Gas Service - PQ/MS	GN-12	7,394	7,394	0	0%
CARE Residential Gas Service - PQ/MS - Expansion	GN-12	381	381	0	0%
Secondary Residential Gas Service	GN-15	4,663,199	4,663,199	0	0%
Secondary Residential Gas Service – Expansion	GN-15	3,615,031	3,615,031	0	0%
Multi-Family Master Metered Gas Service (No Submeter)	GN-20	13,872	13,872	0	0%
Multi-Family Master Metered Gas Service (With Submeter)	GN-25	19,291	19,291	0	0%
Street and Outdoor Lighting Gas Service	GN-30	0	0	0	0%
Agricultural Employee Housing and Nonprofit Group Living					
Facility Gas Service	GN-35	4,985	4,985	0	0%
Core Commercial Gas Service	GN-40	5,815,171	5,815,171	0	0%
Core Natural Gas Service for Motor Vehicles	GN-50	140,747	140,747	0	0%
Small Electric Power Generation Gas Service	GN-66	0	0	0	0%
Total Sales Service		23,887,320	23,887,320	0	0%
Noncore General Gas Transportation Service	GN-70	300,400	300,400	0	0%
Total Gas Service		24,187,720	24,187,720	0	0%

Source: Northern California Division Results of Operations, Workpapers, Ch. 9, Sheet 13.

Exhibit DRA-3

Table 3-2 shows the forecast deliveries for the Southern California Division for TY 2014.

Table 3-2
Southern California Division
Forecast Deliveries (Therms)
Test Year 2014

Description	Rate Schedule	DRA Therms	SWG Therms	Difference	%
Primary Residential Gas Service	GS-10	36,110,073	36,110,073	0	0%
Primary Residential Gas Service - PQ/MS	GS-10	591,146	591,146	0	0%
Primary Residential Gas Service - EXP PQ/MS	GS-10	59,734	59,734	0	0%
Residential Air Conditioning	GS-11	-	-	-	
CARE Residential Gas Service	GS-12	24,160,273	24,160,273	0	0%
CARE Residential Gas Service - PQ/MS	GS-12	837,953	837,953	0	0%
CARE Residential Gas Service - PQ/PQE	GS-12	89,323	89,323	0	0%
Secondary Residential Gas Service	GS-15	3,108,030	3,108,030	0	0%
Multi-Family Master Metered Gas Service (No Submeter)	GS-20	196,393	196,393	0	0%
Multi-Family Master Metered Gas Service (With Submeter)	GS-25	1,199,967	1,199,967	0	0%
Street and Outdoor Lighting Gas Service	GS-30	-	-	-	
Agricultural Employee Housing and Nonprofit Group Living					
Facility Gas Service	GS-35	71,552	71,552	0	0%
Core Commercial Gas Service	GS-40	17,595,180	17,595,180	0	0%
Core Air Conditioning Gas Service	GS-45	-	-	-	
Core Natural Gas Service for Motor Vehicles	GS-50	734,243	734,243	0	0%
Core Internal Combustion Engine Gas Service	GS-60	251,790	251,790	0	0%
Small Electric Power Generation Gas Service	GS-66	236	236	0	0%
Total Sales Service		85,005,893	85,005,893	0	0%
Transportation - Residential	GS-10	-	-	-	
Transportation - Commercial	GS-40	234,619	234,619	0	0%
Gas Engines W/PGA	GS-60	-	-	-	
Noncore General Gas Transportation Service	GS-70	8,336,330	8,336,330	0	0%
Sale for Resale	GS-R	785,669	785,669	0	0%
Special Contract Gas Service	Contract	9,694,392	9,694,392	0	0%
Total Transportation Service		19,051,010	19,051,010	0	0%
Total Gas Service		104,056,903	104,056,903	0	0%

Source: Southern California Division Results of Operations, Workpapers, Ch. 9, Sheets 28.

Exhibit DRA-3

Table 3-3 shows the sales forecast for the South Lake Tahoe Division for TY 2014.

Table 3-3
South Lake Tahoe District
Forecast Deliveries (Therms)
Test Year 2014

Description	Rate Schedule	DRA Therms	SWG Therms	Difference	%
Primary Residential Gas Service	SLT-10	8,584,946	8,584,946	0	0%
Primary Residential Gas Service - PQ/MS EXP	SLT-10	2,147	2,147	0	0%
Primary Residential Gas Service - PQ/MS	SLT-10	25,520	25,520	0	0%
CARE Residential Gas Service	SLT-12	1,735,355	1,735,355	0	0%
CARE Residential Gas Service - PQ/MS	SLT-12	45,344	45,344	0	0%
Secondary Residential Gas Service	SLT-15	4,382,074	4,382,074	0	0%
Multi-Family Master Metered Gas Service (No Submeter)	SLT-20	748,492	748,492	0	0%
Multi-Family Master Metered Gas Service (With Submeter)	SLT-25	415,781	415,781	0	0%
Agricultural Employee Housing and Nonprofit Group Living					
Facility Gas Service	SLT-35	15,846	15,846	0	0%
Core Commercial Gas Service	SLT-40	6,130,384	6,130,384	0	0%
Core Natural Gas Service for Motor Vehicles	SLT-50	91,877	91,877	0	0%
Natural Gas Engine Gas Service	SLT-60	0	0	0	0%
Small Electric Power Generation Gas Service	SLT-66	0	0	0	0%
Total Sales Service		22,177,766	22,177,766	0	0%
Noncore General Gas Transportation Service	SLT-70	579,100	579,100	0	0%
Total Gas Service		22,756,866	22,756,866	0	0%

Source: South Lake Tahoe District Results of Operations, Workpapers, Ch. 9, Sheet 5.

Exhibit DRA-3

B. Customer Forecast or Number of Bills

SWG forecasts the following number of bills for Test Year 2014:

- 309,790 number of bills for the Northern California Division,⁴ (Table 3-4).
- 25,064 number of bills for the Southern California Division,⁵ (Table 3-5).
- 19,399 number of bills for the South Lake Tahoe District.⁶ (Table 3-6).

DRA reviewed Southwest's historical and forecast customer numbers for the Northern California, Southern California and South Lake Tahoe territories. Southwest relied on customer growth trends from 2005 through 2011 to forecast customer growth. DRA used the same methodology as Southwest except that DRA included additional recorded data for 2012.

After review, DRA does not take issue with the utility's number of bills for the Northern California Division, Southern California Division and South Lake Tahoe District. Consequently, DRA accepts SWG's number of bills forecasts in their entirety, and recommends the Commission to adopt SWG's number of bills forecast for TY 2014.

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⁴ Supporting Workpapers to Northern California Division Results of Operations, Ch. 9, Sheet 13.

⁵ Supporting Workpapers to Southern California Division Results of Operations, Ch. 9, Sheet 28.

⁶ Supporting Workpapers to South Lake Tahoe District Results of Operations, Ch. 9, Sheet 5.

Exhibit DRA-3

Table 3-4 shows SWG and DRA number of bills forecasted for the Northern California Division for TY 2014.

Table 3-4
Northern California Division
Customer Forecast for Test Year 2014

Description	Rate Schedule	DRA # of Bills	SWG # of Bills	Difference	%
Primary Residential Gas Service	GN-10	51,310	51,310	0	0%
Primary Residential Gas Service - Expansion	GN-10	83,427	83,427	0	0%
Primary Residential Gas Service - PQ/MS	GN-10	204	204	0	0%
Primary Residential Gas Service - PQ/MS - Expansion	GN-10	12	12	0	0%
CARE Residential Gas Service	GN-12	5,526	5,526	0	0%
CARE Residential Gas Service - Expansion	GN-12	7,119	7,119	0	0%
CARE Residential Gas Service - PQ/MS	GN-12	132	132	0	0%
CARE Residential Gas Service - PQ/MS - Expansion	GN-12	12	12	0	0%
Secondary Residential Gas Service	GN-15	74,511	74,511	0	0%
Secondary Residential Gas Service - Expansion	GN-15	68,657	68,657	0	0%
Multi-Family Master Metered Gas Service (No Submeter)	GN-20	24	24	0	0%
Multi-Family Master Metered Gas Service (With Submeter)	GN-25	12	12	0	0%
Street and Outdoor Lighting Gas Service	GN-30	0	0	0	0%
Agricultural Employee Housing and Nonprofit Group Living					
Facility Gas Service	GN-35	36	36	0	0%
Core Commercial Gas Service	GN-40	18,772	18,772	0	0%
Core Natural Gas Service for Motor Vehicles	GN-50	24	24	0	0%
Small Electric Power Generation Gas Service	GN-66	0	0	0	0%
Total Sales Service		309,778	309,778	0	0%
Noncore General Gas Transportation Service	GN-70	12	12	0	0%
Total Gas Service		309,790	309,790	0	0%

Source: SWG number of bills for Northern California Division Results of Operations, Workpapers, Ch. 9 - Sheet 13.

Exhibit DRA-3

Table 3-5 shows SWG and DRA number of bills forecasted for the Southern California Division for TY 2014.

Table 3-5
Southern California Division
Customer Forecast for Test Year 2014

Description	Rate Schedule	DRA # of Bills	SWG # of Bills	Difference	%
Primary Residential Gas Service	GS-10	902,965	902,965	0	0%
Primary Residential Gas Service - PQ/MS	GS-10	12,060	12,060	0	0%
Primary Residential Gas Service - EXP PQ/MS	GS-10	1,128	1,128	0	0%
Residential Air Conditioning	GS-11	-	-	-	
CARE Residential Gas Service	GS-12	598,705	598,705	0	0%
CARE Residential Gas Service - PQ/MS	GS-12	18,192	18,192	0	0%
CARE Residential Gas Service - PQ/PQE	GS-12	1,920	1,920	0	0%
Secondary Residential Gas Service	GS-15	92,030	92,030	0	0%
Multi-Family Master Metered Gas Service (No Submeter)	GS-20	240	240	0	0%
Multi-Family Master Metered Gas Service (With Submeter)	GS-25	540	540	0	0%
Street and Outdoor Lighting Gas Service	GS-30	-	-	-	
Agricultural Employee Housing and Nonprofit Group Living					
Facility Gas Service	GS-35	156	156	0	0%
Core Commercial Gas Service	GS-40	73,262	73,262	0	0%
Core Air Conditioning Gas Service	GS-45	-	-	-	
Core Natural Gas Service for Motor Vehicles	GS-50	48	48	0	0%
Core Internal Combustion Engine Gas Service	GS-60	132	132	0	0%
Small Electric Power Generation Gas Service	GS-66	12	12	0	0%
Total Sales Service		1,701,390	1,701,390	0	0%
Transportation - Residential	GS-10	-	-	-	
Transportation - Commercial	GS-40	312	312	0	0%
Gas Engines W/PGA	GS-60	-	-	-	
Noncore General Gas Transportation Service	GS-70	156	156	0	0%
Sale for Resale	GS-R	12	12	0	0%
Special Contract Gas Service	Contract	36	36	0	0%
Total Transportation Service		516	516	0	0%
Total Gas Service		1,701,906	1,701,906	0	0%

Source: SWG number of bills for the Northern California Division Results of Operations, Workpapers, Ch. 9 - Sheet 28.

Exhibit DRA-3

Table 3-6 shows SWG and DRA number of bills forecasted for the South Lake Tahoe District for TY 2014.

Table 3-6
South Lake Tahoe California Division
Customer Forecast for Test Year 2014

Description	Rate Schedule	DRA # of Bills	SWG # of Bills	Difference	%
Primary Residential Gas Service	SLT-10	115,255	115,255	0	0%
Primary Residential Gas Service - PQ/MS EXP	SLT-10	12	12	0	0%
Primary Residential Gas Service - PQ/MS	SLT-10	300	300	0	0%
CARE Residential Gas Service	SLT-12	26,535	26,535	0	0%
CARE Residential Gas Service - PQ/MS	SLT-12	612	612	0	0%
Secondary Residential Gas Service	SLT-15	72,767	72,767	0	0%
Multi-Family Master Metered Gas Service (No Submeter)	SLT-20	1,152	1,152	0	0%
Multi-Family Master Metered Gas Service (With Submeter)	SLT-25	144	144	0	0%
Agricultural Employee Housing and Nonprofit Group Living					
Facility Gas Service	SLT-35	84	84	0	0%
Core Commercial Gas Service	SLT-40	16,040	16,040	0	0%
Core Natural Gas Service for Motor Vehicles	SLT-50	12	12	0	0%
Natural Gas Engine Gas Service	SLT-60	0	0	0	0%
Small Electric Power Generation Gas Service	SLT-66	0	0	0	0%
Total Sales Service		232,913	232,913	0	0%
Noncore General Gas Transportation Service	SLT-70	24	24	0	0%
Total Gas Service		232,937	232,937	0	0%

Source: SWG number of bills for South Lake Tahoe District Results of Operations, Workpapers, Ch. 9 - Sheet 5.

**QUALIFICATIONS AND PREPARED TESTIMONY
OF
MARICELA P. SIERRA**

Q.1 Please state your name and address.

A.1 My name is Maricela P. Sierra. My business address is 505 Van Ness Avenue, San Francisco, California.

Q.2 By whom are you employed and in what capacity?

A.2 I am employed by the California Public Utilities Commission as a Public Utilities Regulatory Analyst III in the Division of Ratepayer Advocates Energy Cost of Service and Natural Gas Branch.

Q.3 Briefly describe your educational background and work experience.

A.3 I received a Bachelor of Arts Degree in Economics from California State University, Sacramento. After joining the Commission in 2001, I have worked on areas such as Biennial Cost Allocation Proceeding as the gas throughput witness, cost-benefit analysis, rate design, depreciation, econometric and non-econometric forecasting, energy and water demand forecasting, and operating revenues for various electric, natural gas, and water utilities' general rate case proceedings.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for Exhibits DRA-03, Billing Determinants.

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does.